

A NEW SUBSPECIES OF *CREMATOGASTER*
MINUTISSIMA WITH REVISIONARY NOTES
CONCERNING THAT SPECIES.
(HYMENOPTERA : FORMICIDÆ)

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In 1895 Carlo Emery published the second half of his monograph dealing with North American ants. A considerable proportion of the material on which this work was based had come to Emery from Pergande who was, at that time, connected with the National Museum. As a general rule Pergande gave no names to the ants which he sent to his colleague probably because, in most cases, he was not sure as to what was new. In the instance which I wish to discuss here, however, Pergande had not only recognized the form as new but had selected the name which it now bears. There seems to be no other interpretation which can be placed upon Emery's treatment of *Crematogaster victima* subsp. *missouriensis*. Emery attributed this form to Pergande, stating that the latter had used the name *in litteris*. There is no method whereby one can determine whether Pergande was actually preparing to publish a description of *missouriensis* and it makes very little difference if he was. Emery accompanied his citation of the form with a brief characterization permitting its recognition. This, of course, is the original description of *missouriensis*, which is to be attributed to Emery and not Pergande. I do not doubt that many would regard this as a flagrant case of name-grabbing but it is by no means certain that such was the case. It is difficult to believe that Emery supposed that he could give *missouriensis* to Pergande by merely citing him as author. It seems more probable that Emery was under the impression that Pergande would publish the description of the new form before the appearance of his (Emery's) monograph and that he inad-

vertently let slip into print a manuscript notation which was to have been subsequently altered. It is easier to be tolerant of this mistake than it is to agree with Emery's treatment of the taxonomic status of *missouriensis*. I can see no reason why he should have assigned it to *victima* instead of to Mayr's *minutissima*. In 1870 Mayr had published a key to the New World species of *Crematogaster* in which he clearly distinguished between the characteristics of Smith's *victima* and his own *minutissima*. Emery must surely have employed Mayr's key and just as surely he should have been aware that *missouriensis* is more closely related to *minutissima* than to *victima*. The distinct areas of cephalic punctures which are present in *victima* are absent in the other two forms. In recent years the recognition of a number of additional subspecies has considerably expanded the specific limits of *victima*. Even so the above contention can be defended. Still more peculiar is Emery's disregard for zoögeographical considerations. When he assigned *missouriensis* to *victima* the latter species was known only from Brazil. It would certainly have seemed more logical to consider the possibility of relationship with a species which had been found in the Gulf Coast region. As far as I can determine no one has ever questioned Emery's judgment in the matter. Despite this I believe that *missouriensis* should be regarded as a northern race of *minutissima*. In addition there is a western race which is described below.

Crematogaster (Orthocrema) minutissima thoracica
subsp. nov.

The subspecies *thoracica* differs from the typical form and the subspecies *missouriensis* in its distinctly more shining thoracic dorsum. In both the other two forms the dorsum of the promesonotum bears, in addition to longitudinal rugæ, a number of fine and fairly close-set punctures. These punctures, while not dense enough to produce an opaque appearance, dull the surface to a considerable extent. They are not present in the subspecies *thoracica*. In addition *thoracica* usually lacks longitudinal rugæ on the pronotum and, when they are present, they appear to form a wavy border at the extreme edge of the pronotum. The longi-

tudinal rugæ in the typical *minutissima* are well developed and at least two of them lie well in towards the center of the pronotum. In *missouriensis* the rugæ are variable in position but when they occur at the edge of the thorax, as frequently happens, they are more prominent than in *thoracica*. The shape of the petiole seen from above is usually quite characteristic in *thoracica*. The sides gently diverge behind so that the petiole is widest at the rear. The difference is not great but the wedge-like appearance is rather different from that of the other two subspecies, where the petiole is more quadrate with the sides subparallel and widest, if there is much difference in width, at the middle. The epinotal spines of *thoracica* are short like those of the typical form. In other respects *thoracica* is very similar to the typical *minutissima*.

Described from a series of workers taken by W. M. Mann in Miller Canyon, Huachuca Mountains, Arizona (elevation 6000 ft.). In addition to this type series I have seen other specimens also secured by Dr. Mann, in Ramsey Canyon (elevation 5800 ft.) in the Huachucas.

Holotype (worker) and a series of paratypes in the collection of the Museum of Comparative Zoölogy. Additional paratypes in the collection of the American Museum of Natural History and the collection of the writer.

The three subspecies of *minutissima* and our single remaining species in the subgenus *Orthocrema*, Cr. (*O.*) *arizonensis*, may be separated as follows:

1. Tip of the antennal scape in repose notably surpassing the occipital border; color yellow; the gaster clothed with abundant long hairs 2
 Tip of the antennal scape in repose failing to reach the occipital border; color piceous brown; the erect hairs of the gaster short and sparse: *arizonensis*
2. Dorsum of the promesonotum very smooth and shining; rugæ, if present, feeble and confined to the edge of the pronotum: *minutissima thoracica*
 Dorsum of the promesonotum finely punctate in addition to the longitudinal rugæ, the surface feebly shining; rugæ well-developed and often placed towards the center of the thorax 3

3. Epinotal spines about one-half as long as the distance which separates their bases and rather strongly directed upward; pronotum with the rugæ usually lateral in position: *minutissima missouriensis*

Epinotal spines less than half as long as the distance which separates their bases and directed more backward than upward; pronotum with two prominent rugæ near the middle: *minutissima minutissima*